

IN THE CLAIMS

1. (Original) A method of treating a semiconductor device with a focused ion beam, the device being produced on the surface of a silicon-on-insulator substrate, the method comprising:

causing an insulator layer of a substrate which is part of a semiconductor device to break down by subjecting a second metal line to a focused ion beam until breakdown of the insulator layer occurs;

wherein the insulator layer is located beneath an active zone of a semiconductor structure and wherein the insulator layer is electrically isolated from the rest of the semiconductor device; and

wherein the active zone is electrically connected to the second defined metal line;

forming an electrical connection between a first metal line and the second metal line, wherein the first defined metal line is electrically connected to an electrical ground of the semiconductor device;

treating the semiconductor device with the focused ion beam; and

breaking the electrical connection between the first metal line and the second metal line.

2. (Original) The method according to claim 1, wherein the causing an insulator layer of a substrate which is part of a semiconductor device to break down includes using the focused ion beam with a given polarity of ions, wherein the given polarity of ions is identical to a polarity of a doping for the active zone.

3. (Original) The method according to claim 1, wherein the forming an electrical connection between a first metal line and the second metal line includes forming the electrical connection by depositing a metal bridge between the first metal line and the second metal line by a focused ion beam treatment.

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4. (Original) The method according to claim 2, wherein the forming an electrical connection between a first metal line and the second metal line includes forming the electrical connection by depositing a metal bridge between the first metal line and the second metal line by a focused ion beam treatment.
5. (Original) The method according to claim 3, wherein the breaking the electrical connection between the first metal line and the second metal line includes breaking the electrical connection by removing at least part of the metal bridge deposited by means of a focused ion beam treatment.
6. (Original) The method according to claim 4, wherein the breaking the electrical connection between the first metal line and the second metal line includes breaking the electrical connection by removing at least part of the metal bridge deposited by means of a suitable focused ion beam treatment.
7. (Original) The method according to claim 1, wherein, before the causing an insulator layer of a substrate which is part of a semiconductor device to break down, the second metal line is exposed by removing a passivation layer, by means of a focused ion beam treatment.
8. (Original) The method according to claim 7, wherein, before the forming an electrical connection between a first metal line and the second metal line, the first metal line is exposed by removing a passivation layer by means of a suitable focused ion beam treatment, through a mask having a depassivation window exposing the second exposed metal line.
9. (Original) A semiconductor device produced on the surface of a silicon-on-insulator substrate, the semiconductor device comprising:

at least one active zone and an interconnect structure having a first defined metal line that is electrically connected to the electrical ground of the semiconductor device;

a structure electrically isolated from the rest of the semiconductor device, that comprises an active zone covering an insulator layer of a substrate and an interconnect structure connected to the active zone and having a second defined metal line;

wherein a minimum distance, in a direction parallel to a surface of the substrate, between the active zone of the isolated structure and any other active zone of the device, is greater than the thickness of the insulator layer of the substrate in a direction perpendicular to the surface of the substrate; and

wherein the minimum distance, in a direction parallel to the surface of the substrate, between the elements of the interconnect structure of the isolated structure and the elements of the interconnect structure of the rest of the device, is greater than the thickness of the insulator layer of the substrate in the direction perpendicular to the surface of the substrate.

10. (Original) The semiconductor device according to claim 9, wherein the first metal line and the second metal line belong to a metallization level of the semiconductor device which is furthest away from the substrate.

11. (Original) The semiconductor device according to claim 9, wherein the distance, in the direction parallel to the surface of the substrate, between the first metal line and the second metal line does not exceed 5 μm .

12. (Original) The semiconductor device according to claim 10, wherein the distance, in the direction parallel to the surface of the substrate, between the first metal line and the second metal line does not exceed 5 μm .

13. (Original) The semiconductor device according to claim 9, wherein the dimensions, in the direction parallel to the surface of the substrate, of the active zone of the isolated structure do not exceed 1.3 μm .

14. (Original) The semiconductor device according to claim 10, wherein the dimensions, in the direction parallel to the surface of the substrate, of the active zone of the isolated structure do not exceed 1.3 μm .

15. (Original) The semiconductor device according to claim 11, wherein the dimensions, in the direction parallel to the surface of the substrate, of the active zone of the isolated structure do not exceed 1.3 μm .

16. (Original) The semiconductor device according to claim 12, wherein the dimensions, in the direction parallel to the surface of the substrate, of the active zone of the isolated structure do not exceed 1.3 μm .

17. (Original) The semiconductor device according to claim 13, wherein the dimensions, in the direction parallel to the surface of the substrate, of the active zone of the isolated structure do not exceed 1.3 μm .